

Worried about hormones in cattle?



You don't need to be

Hormone implants are small, slow release pellets placed under the skin in an animal's ear to enhance production of natural hormones. Using hormone implants directs growth towards muscle and away from fat, which boosts growth rate and means less feed is needed for the animal to gain weight.¹

All plants and animals have hormones naturally in their systems. Your body produces hormones no matter what you eat.²



The result is fewer resources are used to produce beef, with smaller impacts on the environment and your grocery bill.

Many common foods have higher amounts of hormones than beef produced with the use of hormone implants^{3,4,5}

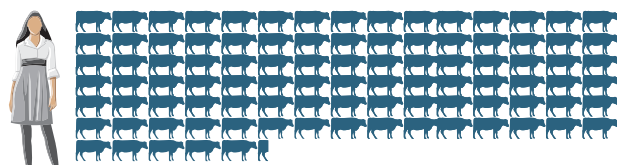
The amount of estrogen from 1 serving of cabbage = the same amount of estrogen from **OVER 1000 servings** of beef produced using hormone implants.

Food/supplement	Estrogen *	Servings of beef~ (75 g)
75 g beef without hormone implants	1.1 ng	0.65
75 g beef with hormone implants	1.9 ng	1
75 g chicken	2.1 ng	1.1
75 g pork	2.5 ng	1.3
355 ml beer	15 ng	7.9
355 ml milk	51 ng	26.8
75 g cabbage	2025 ng	1,065.8
1 tbsp soybean oil	28,370 ng	14,931.6
Birth control pill	20,000-50,000 ng* depending on brand	18,421.1 – 26,315.8

* AMOUNT OF ESTROGEN (1 ng = 1 billionth of a gram)
 ~ EQUIVALENT # OF SERVINGS OF BEEF produced with the use of hormone implants

This is a REALLY small number!

Compare those amounts to the amount of estrogen produced by your body every day⁵



ADULT FEMALE
ESTROGEN = 480,000 ng
 Would have to eat **95.3 cows' worth** of beef produced using hormone implants PER DAY (~222 kg each) to match her own daily production of estrogen



ADULT MALE
ESTROGEN = 136,000 ng
 Would have to eat **27 cows' worth** of beef produced using hormone implants PER DAY (~222 kg each) to match his own daily production of estrogen



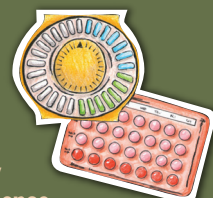
PRE-PUBERTAL GIRL
ESTROGEN = 54,000 ng
 Would have to eat **10.7 cows' worth** of beef produced using hormone implants PER DAY (~222 kg each) to match her own daily production of estrogen



PRE-PUBERTAL BOY
ESTROGEN = 41,500 ng
 Would have to eat **8.2 cows' worth** of beef produced using hormone implants PER DAY (~222 kg each) to match his own daily production of estrogen

ESTROGEN | Amount of estrogen (1 ng = 1 billionth of a gram)
 # OF COW EQUIVALENTS | Produced with the use of hormone implants

Birth control pills are effective because they contain hormones that are specially treated to protect them from being broken down by the acids and enzymes in your digestive system. Naturally occurring or implant hormones are not protected from digestion, meaning that the extra amount you may consume from eating beef produced with the use of hormone implants is not absorbed by the body in any significant amounts.⁶



Researchers believe that increased body fat levels in young children, not hormones in food, is one of the major causes of early onset puberty.^{7,8}



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The use of hormone implants is safe and regulated

Health Canada, the World Health Organization and the United Nations all conclude the use of hormones is a **safe practice** that can be continued **without harm to human health**.^{9 | 10}



Random sampling of final beef product is done by the Canadian Food Inspection Agency to ensure hormone levels are within the normal range.¹²

Canada's **Food and Drugs Act** makes it law that hormone implants used must:

- 1** Do what they are supposed to (be effective)
- 2** Result in food products that are safe for people to eat on a **regular basis**¹¹
- 3** Be safe for the animals

No peer-reviewed scientific studies exist to indicate eating beef produced with hormone implants has any negative impact on human health¹³

+ The use of hormone implants means fewer resources are used to produce beef

11%
MORE

▶ **BEEF**



FROM

20%
FEWER

◀ **CATTLE**



RESULTED FROM PRODUCTION PRACTICES LIKE THE USE OF HORMONE IMPLANTS BETWEEN 1977 AND 2007¹⁴

In Canada, producing a kilogram of live animal weight in 2011 required:

29%
FEWER
CATTLE



24%
LESS
LAND



14%
LESS
GREEN HOUSE GASES



THAN IN 1981¹⁵

IF WE WERE TO RETURN TO **1950s** TECHNOLOGY, WHILE MAINTAINING CURRENT PRODUCTION RATES, THE RESULTS WOULD BE ...

11%
MORE
FEED



4%
MORE
WATER



7%
MORE
FUEL



8%
OR MORE
RETAIL BEEF PRICES¹⁴



The use of hormone implants helps keep beef affordable, and the industry competitive and profitable



Regardless of production system, beef is an important part of a healthy diet.

It's true that adding hormones make cattle grow faster, and more efficiently; this improves profitability for the producer.

A financially sound industry fosters competition that keeps beef affordable for all consumers and allows producers to invest in improvements for the future.

Beef without any added hormones is available. There are no adverse health effects if you choose to buy conventional.

For references, more information about the beef industry, and beef recipes, please visit the consumer section of www.albertabeef.org



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